

# Telescope Innovations Improve Speed, Accuracy of Eye Surgery



## *Goddard Space Flight Center*

### *Abbott Medical Optics Santa Ana, CA*

#### **NASA Technology**

- ◆ Crafting the giant lenses for the forthcoming James Webb Space Telescope (JWST) requires a lot of grinding, polishing, and testing.
- ◆ To polish the mirrors, NASA contracted with a company that innovated technology to hasten the process and reduce costs.

#### **Technology Transfer**

- ◆ WaveFront Science, the subcontractor involved in the project, not only solved a problem for NASA but also created a device that produces detailed maps of the human eye useful for diagnosing disease.
- ◆ Abbott Medical Optics acquired WaveFront Science and used the NASA-funded technology to develop its product, which maps the eye in preparation for LASIK surgery.



#### **Benefits**

- ◆ The iDesign Advanced WaveScan Studio can map the contours of the eye in three seconds, with the resulting data transferred directly to the laser.
- ◆ iDesign also measures distorted surfaces associated with nearsightedness, farsightedness, and astigmatism, among others.